

# PHIT2LEARN, PHysical activity InTerventions to enhance LEARNing in vocational education and training

Citation for published version (APA):

De Groot, R., Ramakers, B., Savelberg, H., Chin A Paw, M., Singh, A., & Gijssels, J. (2017). *PHIT2LEARN, PHysical activity InTerventions to enhance LEARNing in vocational education and training*. Poster session presented at sixteenth annual meeting of the International Society of Behavioral Nutrition and Physical Activity, Victoria, British Columbia, Canada.

## Document status and date:

Published: 10/06/2017

## Document Version:

Publisher's PDF, also known as Version of record

## Document license:

CC BY-NC-ND

## Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

## General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

<https://www.ou.nl/taverne-agreement>

## Take down policy

If you believe that this document breaches copyright please contact us at:

[pure-support@ou.nl](mailto:pure-support@ou.nl)

providing details and we will investigate your claim.

Downloaded from <https://research.ou.nl/> on date: 06 May. 2023

Open Universiteit  
[www.ou.nl](http://www.ou.nl)





# PHIT2LEARN

*PHysical activity InTerventions to enhance LEARning in vocational education and training*

**Renate HM de Groot<sup>1,4</sup>, Bob GE Ramakers<sup>1</sup>, Hans HCM Savelberg<sup>2</sup>, Mai JM Chin A Paw<sup>3</sup>, Amika S Singh<sup>3</sup>, Hieronymus JM Gijsselaers<sup>1</sup>**

<sup>1</sup> Welten institute | Research Centre for Learning, Teaching, and Technology, Open University, the Netherlands.

<sup>2</sup> Department of Human Movement Sciences, Maastricht University, P.O. Box 616, 6200 MD Maastricht, the Netherlands.

<sup>3</sup> Department of Public & Occupational Health and EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands.

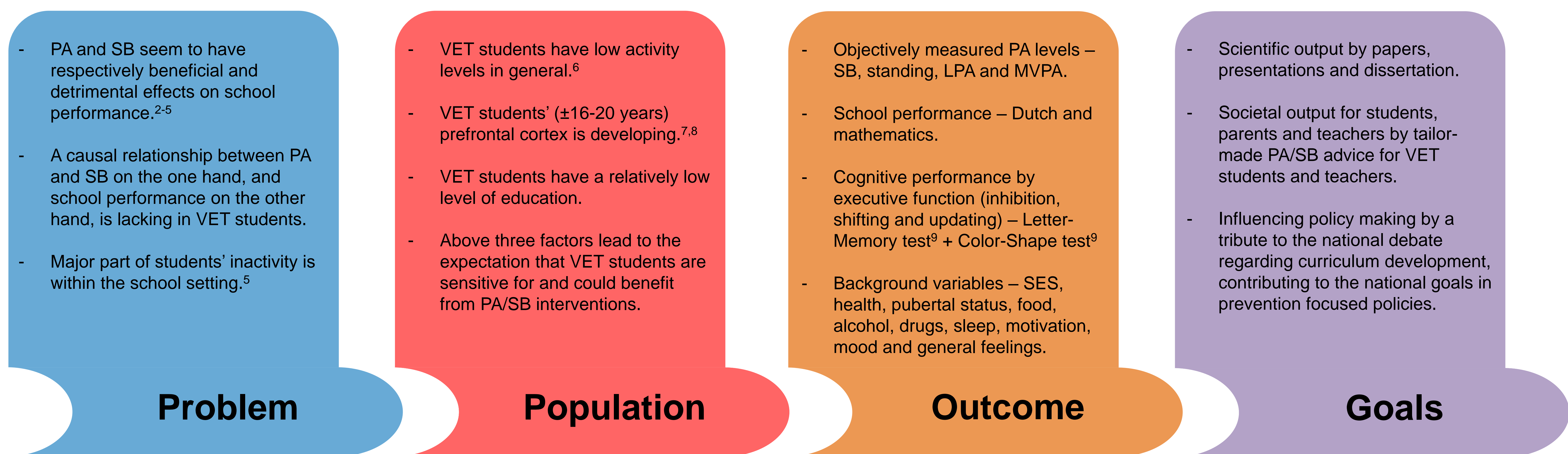
<sup>4</sup> Department of Genetics and Cell Biology, NUTRIM School of Nutrition and Translational Research in Metabolism, Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands.

**Contact:** Renate.deGroot@ou.nl / +31 (0)45 576 2276 – [www.PHIT2LEARN.nl](http://www.PHIT2LEARN.nl)

## Purpose

The rationale behind PHIT2LEARN stems from a rather similar study, investigating the relation between physical activity (PA) and learning performance in primary school children, the SMART MOVES! project.<sup>1</sup> PHIT2LEARN continues on this track and aims to investigate the causal relation between objectively measured PA and sedentary behavior (SB) interventions on the one hand, and a variety of learning performance measures at the other hand, in vocational education and training (VET) students.

## Background, rationale & goals

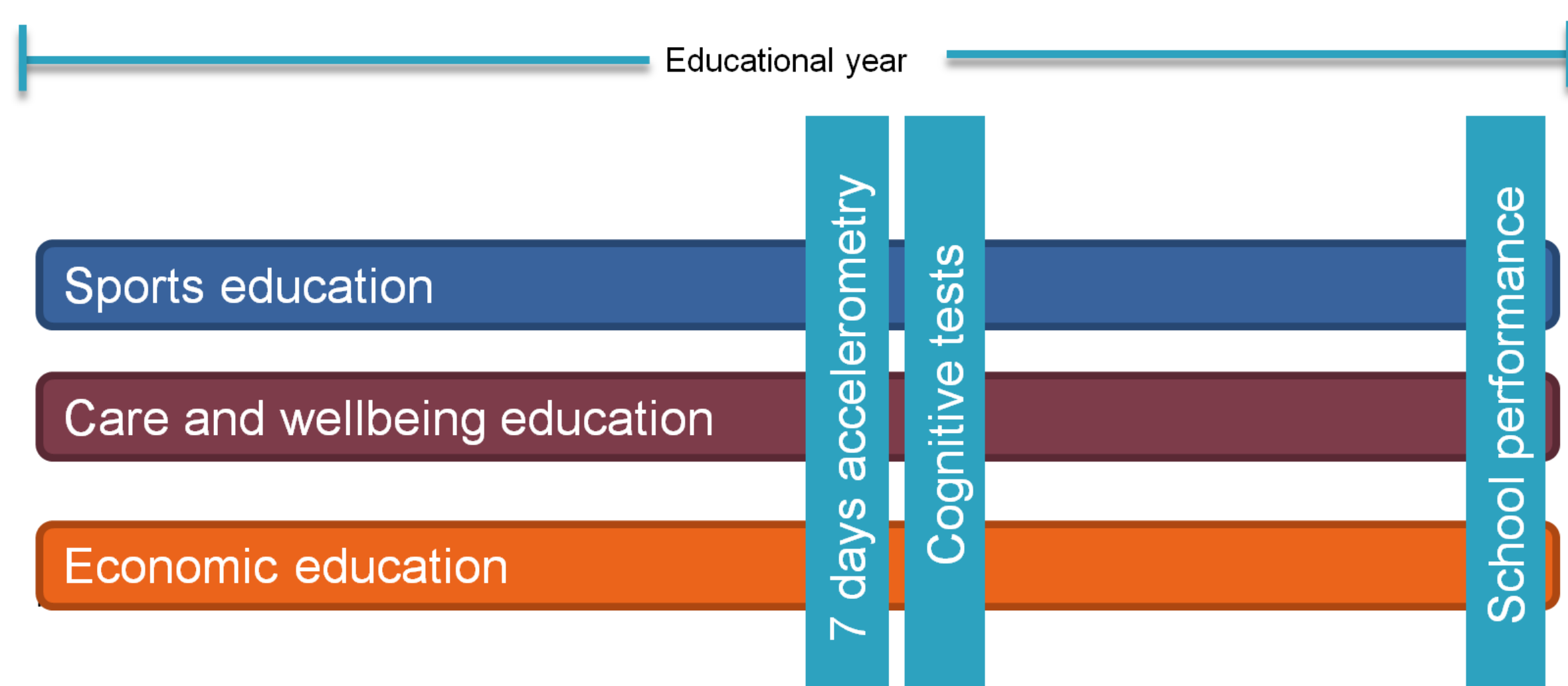


## Methods

In four closely interlinked studies, we investigate the causal effects of 'sedentary behavior repression interventions' on school performance and cognition in VET students. Studies 1, 2 and 3 are mainly intended to yield input for study 4. All studies will be set up and executed in close collaboration with our consortium partners.

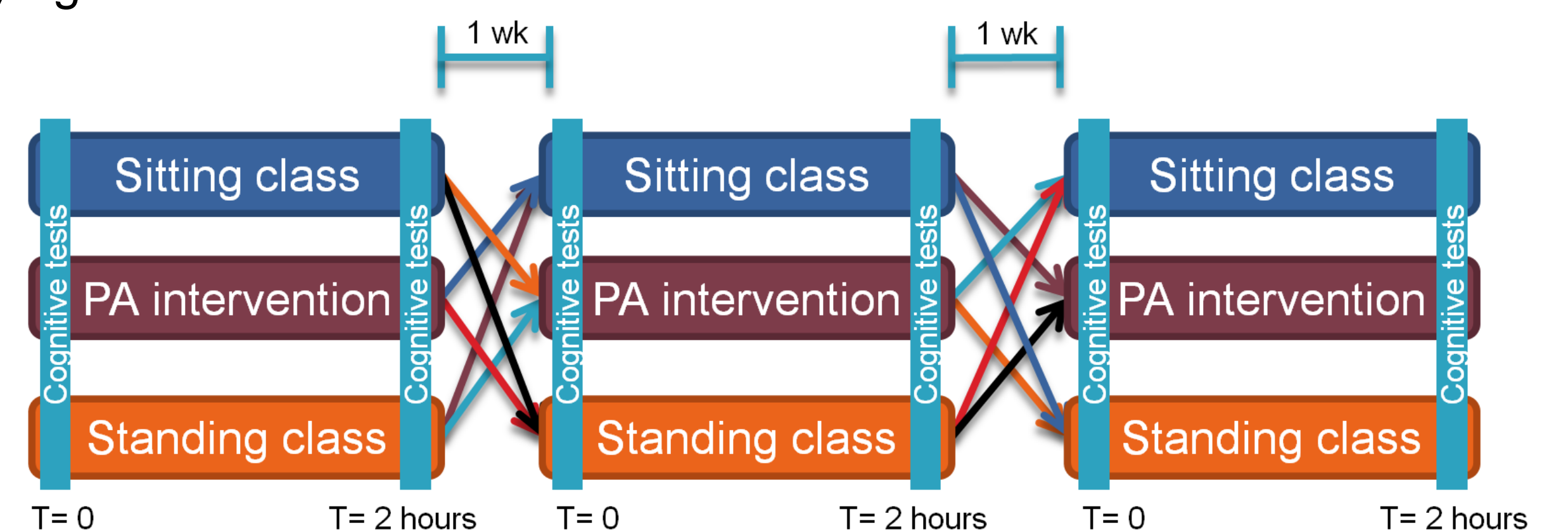
### Study 1

elucidates habitual, objectively measured PA patterns of VET students of 3 different study directions, and potential associations with executive function and school performance.



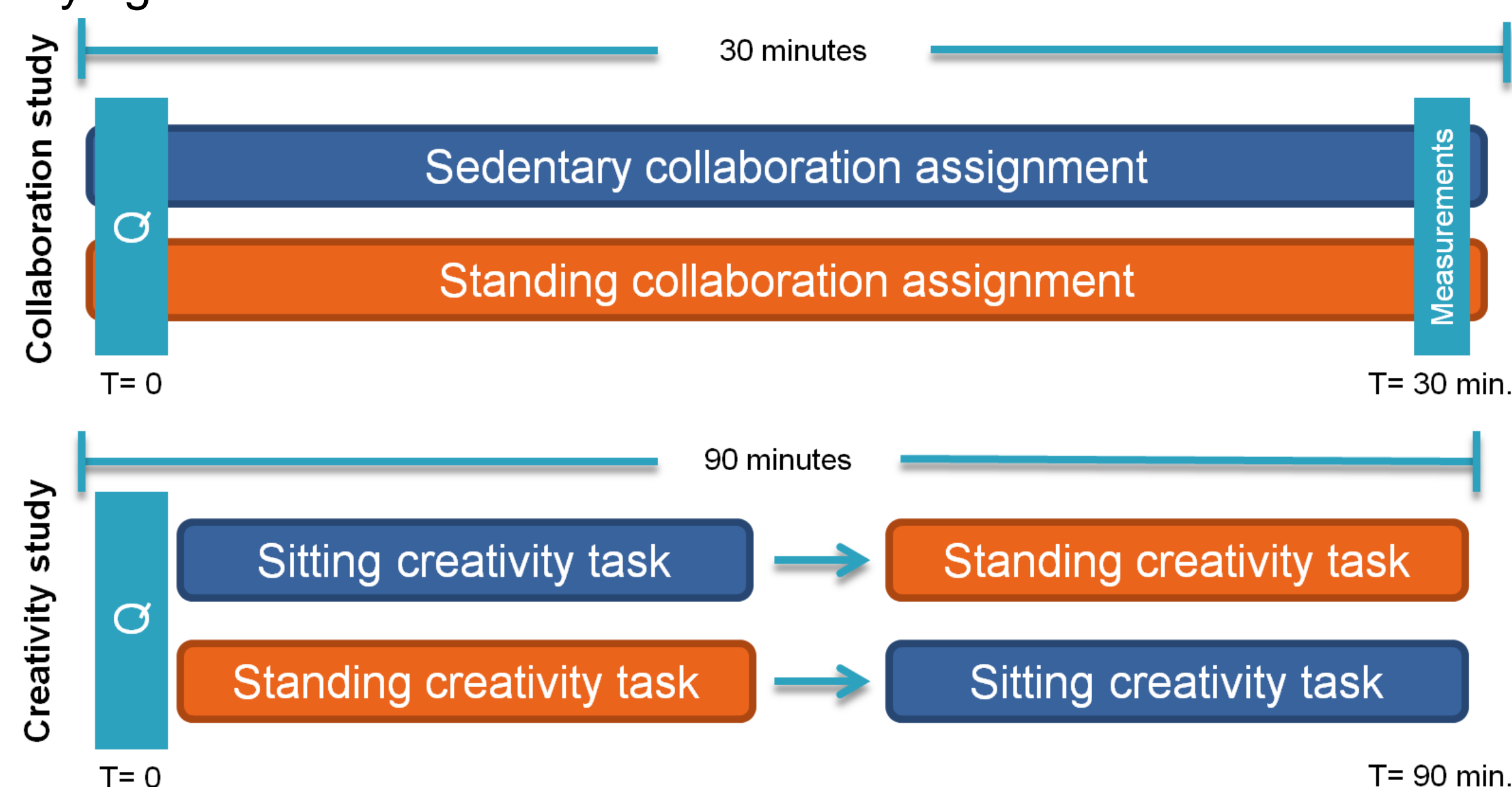
### Study 2

is an RCT in the school setting to determine possible short-term causal effects of PA/SB interventions on cognitive performance. This study also focuses on the underlying mechanisms.



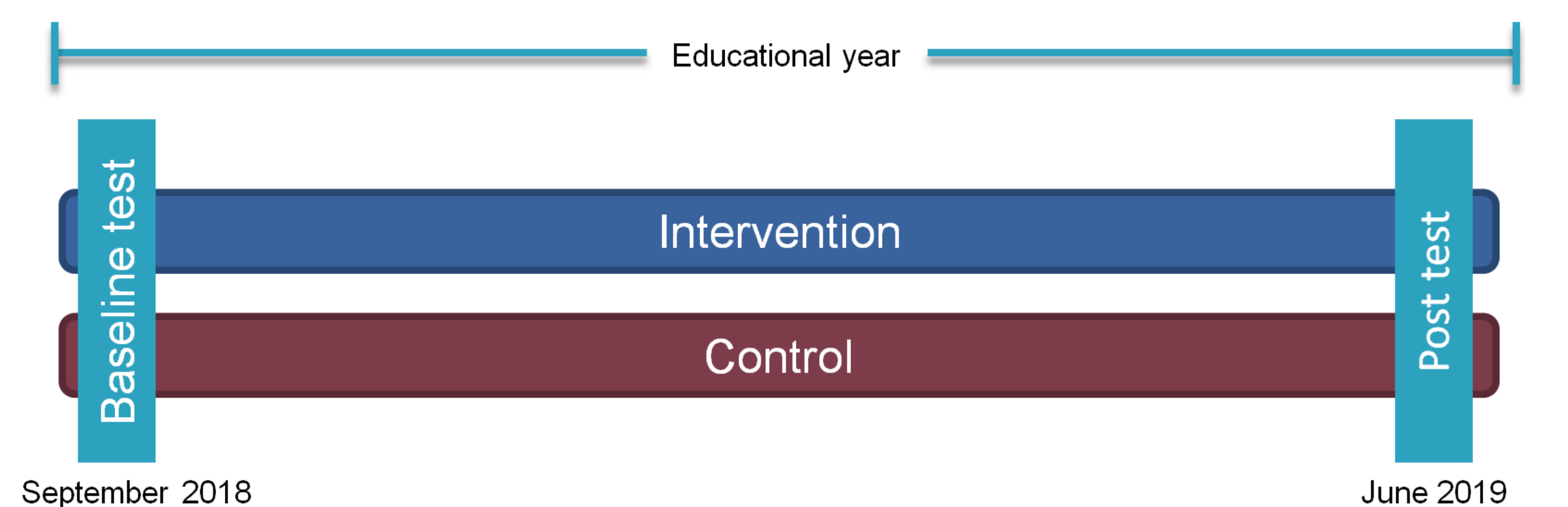
### Study 3

is an RCT in the school setting to determine possible short-term causal effects of standing interventions on collaboration and creativity. This study also focuses on the underlying mechanisms.



### Study 4

is a long-term ecological experiment in the VET setting, based on results from studies 1, 2 and 3, and literature.



## References

- <sup>1</sup> [www.smart-moves.nl](http://www.smart-moves.nl)
- <sup>2</sup> 2011, Singh, A., et al.
- <sup>3</sup> 2016, Donnelly, J.E., et al.
- <sup>4</sup> 2014, Oppizzo, M., et al.
- <sup>5</sup> 2014, Knight, A.P. & Baer, M.

- <sup>6</sup> 2012, Rijpsstra, A. & Bernaards, C.
- <sup>7</sup> 2004, Gogtay, N. et al.
- <sup>8</sup> 2012, Crone, E.A. & Dahl, R.E.
- <sup>9</sup> 2012, Miyake, A. & Friedman, N.

**Welten Institute**  
Research Centre for Learning, Teaching and Technology

**Open Universiteit**  
[welten-institute.org](http://welten-institute.org)

